

What is claimed is:

1. A content usage management system for distributing, via a network, usage control data for controlling a content use in a client apparatus, comprising:

5 one or more distribution servers for distributing the usage control data to the client apparatus by a plurality of different distribution methods; and

a distribution management server for determining a distribution method out of the plurality of distribution methods for
10 distributing usage control data of each content according to attributes of said each content,

wherein one of the distribution servers distributes the usage control data by the determined distribution method.

15 2. The content usage management system according to Claim 1, wherein the attributes of said each content include a compression format of said each content, and

the distribution management server determines the distribution method for the usage control data according to the
20 compression format of said each content.

3. The content usage management system according to Claim 1, wherein the attributes of said each content include information to identify a content provider that provides said each
25 content, and

the distribution management server determines the distribution method for the usage control data according to the content provider of said each content.

30 4. The content usage management system according to Claim 1, wherein the attributes of said each content include a compression ratio of said each content, and

the distribution management server determines the distribution method for the usage control data according to the compression ratio of said each content.

5 5. The content usage management system according to Claim 1, wherein the attributes of said each content include a use condition of said each content, and

the distribution management server determines the distribution method for the usage control data according to the use
10 condition of said each content.

6. The content usage management system according to Claim 1, wherein each of said one or more distribution servers includes at least one of the following units:

15 a unicast distribution unit operable to distribute the usage control data by a unicast distribution method for distributing data in response to a request from the client apparatus; and

a multicast distribution unit operable to distribute the usage control data by a multicast distribution method for distributing data
20 all at once to a plurality of client apparatuses at a predetermined distribution time.

7. The content usage management system according to Claim 6, wherein the distribution management server includes:

25 a distribution method determination rule holding unit operable to hold a distribution method determination rule indicating a rule to determine the distribution method; and

a distribution method determination unit operable to determine the distribution method according to the distribution
30 method determination rule, with reference to the distribution method determination rule corresponding to the attributes of said each content.

8. The content usage management system according to Claim 7, further comprising a content server for distributing contents to the client apparatus,

wherein the distribution management server further includes:

5 a method information generation unit operable to generate information indicating the determined distribution method; and

a method information sending unit operable to send the generated information indicating the distribution method to the content server by associating said information with the contents,

10 wherein the content server distributes the contents including the information indicating the distribution method.

9. The content usage management system according to Claim 8, wherein the client apparatus includes:

15 a content obtainment unit operable to obtain a content from the content server;

a distribution method identification unit operable to extract the information indicating the distribution method from the obtained content and identify the distribution method for the usage control data corresponding to the content based on the extracted information; and

20 a usage control data obtainment unit operable to obtain the usage control data from one of said distribution servers according to the identified distribution method.

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10. The content usage management system according to Claim 9,

wherein the usage control data obtainment unit (1) requests the unicast distribution unit to distribute the usage control data corresponding to the obtained content when the identified distribution method is the unicast distribution method, and (2) waits until the predetermined distribution time at which the usage control data corresponding to the content are distributed when the

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identified distribution method is the multicast distribution method.

11. The content usage management system according to Claim 7, wherein the distribution management server further includes:

5 a method information generation unit operable to generate information indicating the determined distribution method; and

a method information sending unit operable to send the generated information indicating the distribution method to the client apparatus, and

10 the client apparatus includes:

a method information obtainment unit operable to obtain the information indicating the distribution method from the distribution management server;

15 a distribution method identification unit operable to identify the distribution method for the usage control data corresponding to said each content based on the information indicating the distribution method; and

20 a usage control data obtainment unit operable to obtain the usage control data from one of the distribution servers according to the identified distribution method.

12. The content usage management system according to Claim 11,

25 wherein the usage control data obtainment unit (1) requests the unicast distribution unit to distribute the usage control data corresponding to obtained content when the identified distribution method is the unicast distribution method, and (2) waits until the predetermined distribution time at which the usage control data corresponding to the content are distributed when the identified
30 distribution method is the multicast distribution method.

13. The content usage management system according to Claim 6,

wherein each of the distribution servers including the unicast distribution unit further includes an authentication unit to authenticate the client apparatus as an authorized user when the client apparatus is recognized as a previously registered client apparatus through communication with each client apparatus,

wherein the unicast distribution unit distributes the usage control data only to the client apparatus recognized as an authorized user.

14. The content usage management system according to Claim 13,

wherein the authentication unit authenticates the client apparatus by a PKI method.

15. The content usage management system according to Claim 13,

wherein the authentication unit authenticates the client apparatus by a common key method.

16. The content usage management system according to Claim 6, wherein the distribution server including the multicast distribution unit includes a multicast content storage unit operable to store a multicast content that includes content and usage control data corresponding to said content,

wherein the multicast distribution unit distributes the multicast content as the usage control data.

17. The content usage management system according to Claim 16, further comprising a user management server that distributes a predetermined decryption key only to a previously registered user,

wherein the distribution management server includes a control data encryption unit operable to encrypt the usage control

data determined to be distributed by the multicast distribution method, using a key corresponding to the predetermined decryption key,

5 wherein the multicast content storage unit stores the multicast content including the encrypted usage control data.

18. The content usage management system according to Claim 16, further comprising a content server which distributes only the content whose usage control data is determined to be distributed by
10 the unicast distribution method,

wherein the unicast distribution unit distributes only the usage control data of said each content to be distributed by the content server.

15 19. The content usage management system according to Claim 18,

wherein the client apparatus includes:

a content request unit operable to request the content server to distribute the content and obtain the content;

20 a distribution method judgement unit operable to judge a distribution method for the usage control data corresponding to the requested content, according to success or failure of the obtainment of the content from the content server; and

25 a usage control data obtainment unit operable to obtain the usage control data from one of the distribution servers depending on a result of the judgement.

20, The content usage management system according to Claim 19,

30 wherein the distribution method judgement unit judges (1) that the usage control data are distributed by the unicast distribution method when the obtainment is successful, and (2) that

the usage control data are distributed by the multicast distribution method when the obtainment is failed, and

the usage control data obtainment unit (1) requests the distribution server to distribute the usage control data by the unicast distribution method to distribute the usage control data corresponding to the content successfully obtained, when it is judged that the usage control data are distributed by the unicast distribution method, and (2) waits until the predetermined distribution time at which the multicast content is distributed when it is judged that the usage control data are distributed by the multicast distribution method, the multicast content including the content failed to be obtained.

21. The content usage management system according to Claim 20,

wherein the multicast content includes an encrypted usage control data, and

the client apparatus further includes:

a control data decryption key holding unit operable to previously hold a control data decryption key to decrypt the encrypted usage control data;

a control data separation unit operable to separate the usage control data from the obtained multicast content when it is judged that the usage control data is distributed by the multicast distribution method; and

a control data decryption unit operable to decrypt the separated usage control data using the control data decryption key held by the control data decryption unit.

22. The content usage management system according to Claim 1, wherein the usage control data include a decryption key to decrypt an encrypted content, and

the client apparatus includes:

a usage control data obtainment unit operable to obtain the usage control data corresponding to said each content from any one of the distribution servers;

5 a decryption unit operable to extract the decryption key from the obtained usage control data and decrypt the content corresponding to the usage control data using the extracted decryption key; and

10 a reproduction unit operable to reproduce the decrypted content.

23. The content usage management system according to Claim 22,

15 wherein the usage control data further include a use condition for using content, and

the client apparatus further includes a reproduction control unit operable to extract the use condition from the obtained usage control data and control the reproduction unit to perform the reproduction within an extent to which the extracted use condition is
20 satisfied.

24. A content usage management method for a server to distribute, via a network, usage control data for controlling a content use in a client apparatus, comprising:

25 a distribution method determination step of determining a distribution method for distributing the usage control data of each content according to attributes of said each content; and

a distribution step of distributing the usage control data by the determined distribution method out of the plurality of different
30 distribution methods.

25. The content usage management method according to Claim

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wherein a distribution method determination rule indicating a rule of determining the distribution method is previously held, and

5 in the distribution method determination step, the distribution method is determined according to the distribution method determination rule, with reference to the distribution method determination rule corresponding to the attributes of said each content.

10 26. The content usage management method according to Claim 25,

wherein the attributes of said each content include a compression format of said each content, and

15 in the distribution method determination step, the distribution method of the usage control data is determined, with reference to the distribution method determination rule corresponding to the compression format of said each content.

20 27. The content usage management method according to Claim 25,

wherein the attributes of said each content include information to identify a content provider for providing said each content, and

25 in the distribution method determination step, the distribution method of the usage control data is determined, with reference to the distribution method determination rule corresponding to the content provider of said each content.

30 28. The content usage management method according to Claim 25,

wherein the attributes of said each content include a compression ratio of said each content, and

in the distribution method determination step, the distribution method of the usage control data is determined, with reference to the distribution method determination rule corresponding to the compression rate of said each content.

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29. The content usage management method according to claim 25,

wherein the attributes of each said content include a use condition of content, and

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in the distribution method determination step, the distribution method of the usage control data is determined, with reference to the determination method determination rule corresponding to the use condition of said each content.

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30. A client apparatus in a content usage management system for distributing, via a network, usage control data for controlling a content use in the client apparatus by one of a plurality of different distribution methods, comprising:

20 a content request unit operable to request a content server which distributes content to distribute the content and obtain the content;

25 a distribution method judgement unit operable to judge a distribution method for the usage control data corresponding to the requested content, according to success or failure of the obtainment of the content distributed from the content server; and

a usage control data obtainment unit operable to obtain the usage control data from a distribution server that distributes the usage control data by the judged distribution method.

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31. The client apparatus according to Claim 30, wherein the distribution method judgement unit judges (1) that the usage control data are distributed by a unicast distribution

method in which a server sends data in response to a request from the client apparatus when the obtainment is successful, and (2) that the usage control data are distributed by a multicast distribution method in which the server sends the data all at once to a plurality of client apparatuses at a predetermined distribution time when the obtainment is failed, and

the usage control data obtainment unit (1) requests the distribution server that distributes the usage control data by the unicast distribution method to distribute the usage control data corresponding to the content successfully obtained, when it is judged that the usage control data are distributed by the unicast distribution method, and (2) waits until the distribution time at which the multicast content is distributed when it is judged that the usage control data are distributed by the multicast distribution method, the multicast content including the content failed to be obtained and the usage control data corresponding to the content.

32. The client apparatus according to Claim 30,

wherein the usage control data include a decryption key to decrypt an encrypted content, and

the client apparatus further includes:

a decryption unit operable to extract the decryption key from the obtained usage control data and decrypt content corresponding to the usage control data using the extracted decryption key; and

a reproduction unit operable to reproduce the decrypted content.

33. The client apparatus according to Claim 32,

wherein the usage control data further include a use condition for using content, and

the client apparatus further includes a reproduction control unit operable to extract the use condition from the obtained usage

control data and control the reproduction unit to perform the reproduction within an extent to which the extracted use condition is satisfied.

5 34. A client apparatus in a content usage management system for distributing, via a network, usage control data for controlling a content use in the client apparatus by one of a plurality of different distribution methods, comprising:

10 a content obtainment unit operable to obtain content including information indicating a distribution method for usage control data corresponding to said each content from a content server which distributes contents;

15 a distribution method identification unit operable to extract information indicating the distribution method from the obtained content and identify the distribution method for the usage control data corresponding to said each content based on the extracted information; and

20 a usage control data obtainment unit operable to obtain the usage control data from a distribution server that distributes the usage control data by the identified distribution method.

35. The client apparatus according to Claim 34,

25 wherein the usage control data obtainment unit (1) requests a distribution server that distributes the usage control data by a unicast distribution method to distribute the usage control data corresponding to the obtained content when the identified distribution method is the unicast distribution method in which a server distributes data according to a request from the client apparatus, and (2) waits until a predetermined distribution time at
30 which the usage control data corresponding to the content are distributed when the identified distribution method is a multicast distribution method in which a server distributes data to a plurality

of client apparatuses all at once at the predetermined distribution time.

36. A client apparatus in a content usage management system for distributing, via a network, usage control data for controlling a use of content in the client apparatus by one of a plurality of different distribution methods, comprising:

a method information obtainment unit operable to obtain information indicating a distribution method for each usage control data from a server which determines a distribution method for the usage control management data;

a distribution method identification unit operable to identify the distribution method for the usage control data corresponding to the content based on the information indicating the distribution method; and

a usage control data obtainment unit operable to obtain the usage control data from a distribution server that distributes the usage control data by the identified distribution method.

37. The client apparatus according to Claim 36,

wherein the usage control data obtainment unit (1) requests a distribution server that distributes the usage control data by a unicast distribution method for distributing the usage control data corresponding to the obtained content when the identified distribution method is the unicast distribution method in which a server distributes data according to a request from the client apparatus, and (2) waits until a predetermined distribution time at which the usage control data corresponding to the content are distributed when the identified distribution method is a multicast distribution method in which a server distributes data all at once to a plurality of client apparatuses at the predetermined distribution time.

38. A server that distributes, via a network, usage control data for controlling a content use in a client apparatus, comprising:

a distribution method determination unit operable to determine by which one of distribution methods to distribute the usage control data of each content according to attributes of said each content; and

a distribution unit operable to distribute the usage control data by the determined distribution method out of the plurality of different distribution methods.

39. The server according to Claim 38 further including a distribution method determination rule holding unit operable to previously hold a distribution method determination rule indicating a rule to determine the distribution method,

wherein the distribution method determination unit determines the distribution method according to the distribution method determination rule, with reference to the distribution method determination rule corresponding to the attributes of said each content.

40. A program for a server to distribute, via a network, usage control data for controlling a content use in a client apparatus to the client apparatus, the program having a computer execute the following steps:

a distribution method determination step of determining by which one of distribution methods to distribute the usage control data of each content according to attributes of said each content; and

a distribution step of distributing the usage control data by the distribution method out of the plurality of different distribution methods.

41. A program for a client apparatus in a content usage management system for distributing, via a network, usage control data for controlling a use of content in the client apparatus by one of a plurality of different distribution methods, the program having a
5 computer execute the following steps:

a content request step of requesting a content server that distributes content to distribute the content and obtaining the content;

10 a distribution method judgement step of judging a distribution method for usage control data corresponding to the requested content according to success or failure of the obtainment of the content from the content server; and

a usage control data obtainment step of obtaining the usage control data from a distribution server that distributes the usage
15 control data by the judged distribution method.

42. A program for a client apparatus in a content usage management system for distributing, via a network, usage control data for controlling a use of content in the client apparatus by one of
20 a plurality of different distribution methods, the program having a computer to execute the following steps:

a content obtainment step of obtaining content including information indicating a distribution method for usage control data corresponding to each content from a content distribution server
25 that distributes said each content;

a distribution method identification step of extracting information indicating the distribution method from the obtained content and identifying the distribution method for the usage control data corresponding to the content based on the extracted
30 information; and

a usage control data obtainment step of obtaining the usage control data from a distribution server that distributes the usage

control data by the identified distribution method.

43. A program for a client apparatus in a content usage management system for distributing, via a network, usage control
5 data for controlling a use of content in the client apparatus by one of a plurality of different distribution methods, the program having a computer to execute the following steps:

10 a method information obtainment step of obtaining information indicating a distribution method for each usage control data from a server that determines the distribution method for the usage control data;

15 a distribution method identification step of identifying the distribution method for the usage control data corresponding to the content based on the information indicating the usage control data; and

a usage control data obtainment step of obtaining the usage control data from a distribution server that distributes the usage control data by the identified distribution method.